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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/581,253

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Hitoshi Yokoyama

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EXAMINER

BADR, HAMID R

ART UNIT

PAPER NUMBER

1781

NOTIFICATION DATE

DELIVERY MODE

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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/581,253	Applicant(s) YOKOYAMA ET AL.	
	Examiner HAMID R. BADR	Art Unit 1781	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on RCE, 6/21/2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9 and 11-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9 and 11-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/21/2010 has been entered.

Claims 9, and 11-15 are being considered on the merits.

Use Claims

1. Claim 11 provides for the use of lactic acid bacteria, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 11 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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2. Claims 9 and 11-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 9 is indefinite for "in an amount of 0.35 to 3.5 parts by weight in terms of soybean solid content based on 100 parts by weight of cereal flour with cereal flour for bread with cereal flour for bread". The phrase as written is not clear. For examination purpose it is assumed that fermented soybeans is mixed with cereal flour at 0.35 to 3.5 baker's percent based on dry weigh of fermented product. This means that 0.35 to 3.5 parts dried fermented product is mixed with 100 parts of cereal flour.

4. Claim 11 is indefinite for "the bacteria used for the lactic fermentation is derived from sour leaven". The word derived implies that those bacteria are either isolated from sour leaven as pure culture or they are mutants of bacteria contained in sour leaven. It is unclear whether a natural starter as found in sour leaven is involved in the fermentation or pure cultures of yeast and bacterial flora of sour leaven are employed for the fermentation process. Therefore it is not clear what applicants regard as their invention.

5. Claim 12 is indefinite for "a soybean solid content in the fermented soybean".

Dependent claim 12 is expected to be written using definite article 'the'.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 9 and 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP-11-253095 (Machine translation; hereinafter R1) in view of Kato et al. (US

5,972,394; hereinafter R2).

3. R1 discloses a process wherein soybean milk is mixed with cereal flour for bread making. [0001]

4. R1 discloses that the soybean milk is a part of the raw materials of their bread. [0007]

5. R1 discloses mixing about 10% (w/w) soybean milk with the cereal flour. [0016]
Assuming the soybean milk to contain 15-20% solid content, the amount disclosed by R1 will provide about 1.5% soybean solids.

6. R1 also discloses adding more soybean milk to the final dough and mixing with the rest of the ingredients. [0017, 0018]

7. R1 is silent regarding the addition of sterilized; fermented soybean milk in the bread formulation.

8. R2 discloses a method of preparing a fermented soybean milk comprising subjecting a soybean milk to fermentation with yeast and lactic acid bacteria and subjecting the resulting fermented soybean milk to a deactivation treatment to deactivate the yeast and bacteria by heat. (Abstract).

9. R2 discloses *Saccharomyces cerevisiae* as the yeast and a group of lactic acid bacteria, including *S. thermophilus* and *L. bulgaricus*, for the lactic fermentation. (Col. 3,

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lines 49-63). The sour leaven as presently claimed comprises *S. exiguus*, *L. sanfrancisco*, *L. italicus*. All of these organisms are known in the sour dough art and sour dough bread comprising these organisms is a conventional bread. Therefore, using such organisms for lactic and yeast fermentations as presently claimed, for creating the typical flavor and aroma of sour dough bread, would have been obvious to an artisan.

10. R2 discloses that after adding the yeast and the lactic acid bacteria into the soybean milk, the milk undergoes fermentation. (col. 3, lines 49-63)

11. Given that lactic acid bacteria of sour leaven are known in the art of baking, it is obvious that the lactic acid bacteria for the mixed fermentation of soybean milk can be derived from sour leaven as presently claimed to mimic the flavor and aroma of sour dough bread.

12. It is noted that the pH range 4.0-4.8, as presently claimed, is intrinsic in the fermented soybean protein as disclosed by R2.

13. R2 discloses the heat treatment and deactivation of the fermented soybean milk. (Col. 4, lines 36-50). The sterilization of the fermented soybean product, as presently claimed, is thus obvious.

14. R2 discloses during the fermentation, various substances including alcohol and lactic acid are produced and the flavor and the taste are simultaneously improved so as to obtain a fermented soybean milk which has a good flavor and a good taste. (Col. 3, lines 3-7).

15. The improved good flavor and taste of the fermented soybean product, as disclosed by R2, in comparison with the conventional soybean milk will motivate those

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of skill in the art to incorporate the fermented product into the bread formulation to bring about improved aroma and taste of the baked bread.

16. Therefore, it would have been obvious to modify the teachings of R1 and use the mixed fermentation product of soybeans as taught by R2 . One would do so to improve the quality of the baked bread regarding aroma and flavor of the baked bread. Absent any evidence to contrary and based on the combined teachings of the cited references, there would be a reasonable expectation of success in incorporating the fermented soybean product into bread dough to impart functionality and flavor to the baked bread.

17. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP-11-253095 (Machine translation; hereinafter R1) and Kato et al. (US 5,972,394; hereinafter R2) as applied to claim 9, further in view of Ishigaki et al. (US 6,183,787; hereinafter R3).

18. R1 and R2 are silent regarding the proteolysis of soybean milk.

19. R3 discloses a quality improver for producing bread comprising a lactic acid fermentation product of soy bean. (Abstract)

20. R3 discloses bread formulations by incorporating quality improvers for producing bread. R3 discloses the addition of protease into the formulations. The lactic acid fermentation product of product of soybean is produced by preparing the soybeans, adding the protease to the slurry and hydrolyzed for 30 minutes. Then a lactic acid starter is added and fermented for certain time at certain temperature. Bread is then

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produced by incorporating the quality improver into wheat flour. (Col. 9, Examples 1-4, Table 1 and lines 25-40 and col.7, lines 48-54).

21. Therefore, it would have been obvious to modify the teachings of R1 and use the mixed fermentation product of soybeans as taught by R2 while treating the soybean proteins with protease as taught by R3. One would do so to improve the quality of the baked bread regarding aroma and flavor as well as the nutritional quality of the baked bread. Absent any evidence to contrary and based on the combined teachings of the cited references, there would be a reasonable expectation of success in incorporating the fermented soybean product into bread dough to impart functionality and flavor and nutritional quality to the baked bread.

Response to Arguments

Applicants' arguments from the response filed 4/19/2010 have been incorporated by reference in Applicants' response filed 6/21/2010. These arguments have been reviewed. However, in light of the new ground(s) of rejection in the current Office action, those arguments are moot.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HAMID R. BADR whose telephone number is (571)270-3455. The examiner can normally be reached on M-F, 8:00-5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on (571) 272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Hamid R Badr
Examiner
Art Unit 1781

/Keith D. Hendricks/

Supervisory Patent Examiner, Art Unit 1781